

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

Name of Project: Input data
Name of Structure: Input data
Structure Number: Input data
Project Number: Input data
PIN: Input data

Originator: Input name and initials Date: _____
Checker: Input name and initials Date: _____

Instructions

The purpose of the Situation and Layout (S&L) sheets is to provide sufficient horizontal, vertical alignment and utility information to verify all horizontal and vertical geometrical features, such as crossing angles, clearances, cross slopes, etc., without referring to the roadway plans. The S&L sheets also indicate the structure type, span and key geometric features of the structure.

The originator completes the checklist. The originator provides the information listed and checks the Yes box. Check the NA box if the information is not applicable to the structure. Check the No box and provide a comment if the information listed is not provided but is applicable to the project.

The checker checks each line when in agreement with the originator. Do not check the Chk box if the information is missing or inaccurate. All boxes must be checked prior to submittal to UDOT for review.

Submit the completed checklist with the Structural Documentation Package required for task 3S6 Situation and Layout (S&L) Acceptance (Minor & Major). Task 3S6 is completed prior to the Plan-in-Hand review.

The checklists are not all inclusive. Designers must review the plans and include all information required to construct the bridge and meet the designers intent. Update all example notes to match the requirements of the design. Present all information neatly and clearly. Refer to the sample sheets for examples of acceptable sheets.

The document contains checklists for the following elements.

- Title Block
- Plan View
- Index of Sheets
- Elevation View
- Bridge Load Rating Table
- Horizontal Alignment Data
- Location Plan
- General Notes
- Design Data
- Quantities
- Hydraulic Data
- Section Through Structure
- Superelevation Data
- Profile Data
- Phasing

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

TITLE BLOCK	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Complete all information required in the standard title. <ul style="list-style-type: none"> Top line = project name Second line = structure name Third line = sheet name 					
Complete the title block.					
Fill in initials, dates, and signatures.					

PLAN VIEW	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Place the plan view on the first S&L sheet. Provide a match line and extend the plan view to the second S&L sheet if justified by the structure length.					
Increase the stationing of bridge alignment from left to right.					
Identify the survey and profile lines of all alignments. <ul style="list-style-type: none"> I-15 CONTROL LINE, I-15 SB PGL, 1600 NORTH (OREM) CONTROL LINE AND PGL 					
Label the bearings of all tangent alignments.					
Label the crossing stations with station and alignment designation of each intersecting alignment. <ul style="list-style-type: none"> I-15 STA 3150+81.61.00, 1600 NORTH STA 24+55.56 					
Label the crossing angles. Measure the crossing angle to the right while looking station ahead from the control line of the structure to the control line of the feature crossed. If one or both alignments involve a horizontal curve, measure the angle to a line tangent to the curve at the point of intersection.					
Show and label the centerline of all supports with the support designations. If the centerline support and the centerline bearing coincide, label as centerline bearing of support. Number each support consecutively in the direction of increasing stations regardless of the type of support. <ul style="list-style-type: none"> ☉ BRG ABUT #1 or ☉ BRG BENT #2 or ☉ BENT #2 					
Label the station and elevation of each support at the intersection of the profile line and centerline of support.					
Label the station at the intersection of the control line and the centerline of the support if the control line is different from the profile line.					
Label each different angle once when one or more supports are not parallel to each other or to the alignment of the feature crossed, or if the angle between the reference tangent of the structure and the centerline of the support differ from the crossing angle.					
Label the stations at outside of backwalls. The label is optional at Plan-in-Hand stage.					
Label the lane directions. <ul style="list-style-type: none"> NB or SB or WB or EB Place traffic flow arrows. Show the striping up to bridge. Do not show the striping on the bridge and approach slab. Do not show the striping under the bridge.					
Show and label the point of minimum vertical clearance. Use the typical labels listed in order of preference below. <ul style="list-style-type: none"> PTMVC PT OF MIN VERT CLR POINT OF MINIMUM VERTICAL CLEARANCE 					

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PLAN VIEW	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show and label the deck or approach slab drains when present. <ul style="list-style-type: none"> APPROACH SLAB DRAIN (TYP X PLACES) DECK DRAIN (TYP X PLACES) 					
Verify the deck and approach slab drains are connected to the drainage system. Do not discharge drainage into the RR ROW.					
Show and label the approach slab, parapet, curb, sidewalk, noisewall, and fence.					
Verify the fence height, length, and shape meet RR requirements.					
Show and label the adjacent retaining walls. Use the label format. <ul style="list-style-type: none"> WALL X 					
Show and label the adjacent structures. Use the structure number if applicable.					
Show the North Arrow and verify the North Arrow direction.					
Show the overall structure length. Use the typical labels listed below. Use the measured along X control line format when it is unclear which control line defines the span. <ul style="list-style-type: none"> X'-X" OUT TO OUT BACKWALL X'-X" OUT TO OUT BACKWALL (MEASURED ALONG X CONTROL LINE) 					
Show the overall length from the centerline of abutment bearing to the centerline of abutment bearing and the length of each span. <ul style="list-style-type: none"> X'-X" C/L BRG TO C/L BRG X'-X" SPAN X 					
Label the distance between profile lines on twin structures.					
Label the out to out of parapet dimension and the gap between parapets.					
Label the width of each phase of construction but do not show the phase line across the structure.					
Label the dimension between toes of slope if the alignment crossed is on a curve. Measure and label the distance normal to the control line.					
Label the width of RR ROW and label the RR ROW lines.					
Label the minimum horizontal clearance between the centerline of the nearest RR track to the bridge support.					
Show the dimensions and slopes of features crossed that cannot be defined in the elevation view. For example, when the alignment crossed is on a horizontal curve or the structure crosses multiple alignments that are not parallel to each other, show lane and shoulder widths and superelevations, median boundaries and slopes, and minimum horizontal clearances between the travelled way and the closest support or other obstruction.					
Label the existing bridge as shown below and show the outline of the existing bridge if the project involves a bridge replacement. <ul style="list-style-type: none"> REMOVE BRIDGE X 					
Show all utilities in the vicinity of the structure. Label the utility size and type of utility when known. Provide the owners name in parentheses when known. Label all utilities in uppercase text. Add a separate utility sheet showing the plan and elevation with utilities labeled in each view if the utility lines and labels make the primary plan view cluttered and difficult to understand. Add a note under the primary plan title with a reference to the utility sheet if a utility sheet is used. Use of a separate utility sheet is appropriate for the majority of projects.					
Label the curve numbers on alignments if the alignment has multiple curves.					
Show and label the limits of riprap. Use the following label. <ul style="list-style-type: none"> LIMITS OF RIPRAP 					
Typical title: PLAN					

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

INDEX OF SHEETS	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Provide space for the index of sheets on the first S&L sheet. List the sheet titles exactly as they appear in the title block of the sheet referenced.					
Typical title: INDEX OF SHEETS					

ELEVATION VIEW	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show the elevation view normal to the feature crossed unless the structure crosses multiple alignments that are not parallel to each other. Show the elevation view along the profile or control line of the structure when the structure crosses multiple alignments that are not parallel to each other. If the bridge alignment or the alignment crossed is curved and if a section cut normal to the control line of the feature crossed does not intersect the bridge abutments show the elevation view along the bridge control line. The left half of the elevation view shows a section through the structure. The right half shows an elevation including parapets, fences or noise walls.					
If the elevation view is normal to the feature crossed, show the dimensions between centerline of supports normal to the feature crossed and the total dimension between the abutments. If the elevation view is along the Control Line of the structure, show the dimension between centerline of supports and the total dimension between the abutments along the Control Line and add a label under the title indicating the spans and total length are measured along the control line. • MEASURED ALONG X CONTROL LINE					
Label the control line and/or profile lines of the feature crossed.					
Label the lane and shoulder widths of the feature crossed.					
Label the distance and slope(s) from sidewalk or outside edge of the road section to the toe of fill/cut, or to the face of retaining walls.					
Label the superelevation on roadway. Place a label on each side of the PGL with the arrow pointing away from the PGL and the superelevation labeled negative if the slope goes down from the PGL. Use the following label if the superelevation varies and provide a table defining the superelevation transitions. • VARIES					
Label the slope of the median slope banks.					
Define the typical section of waterway including channel bottom width, side slopes, riprap thickness and limits above and below flow line, geotextile and channel changes, as applicable.					
Label the flow line elevation when the information is available, indicating whether natural ground or channel change.					
Label the backwater elevation for Qd.					
Label the low girder elevation when Qd is provided.					

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

ELEVATION VIEW	Provided (Originator)			Chk	Comments
	Yes	No	NA		
<p>Locate and label the point of minimum vertical clearance under the structure. The minimum vertical clearance must be greater than 16'-6" for bridges over roads and greater than 23'-4" for bridges over railroads. Use the following label format.</p> <ul style="list-style-type: none"> X'-X" MVC <p>Provide additional clearance required for settlement during construction and label the anticipated settlement. Use the following label format.</p> <ul style="list-style-type: none"> X'-X" MVC, SEE NOTE X <p>In note X state.</p> <ul style="list-style-type: none"> THE VERTICAL CLEARANCE LISTED INCLUDES A X" ALLOWANCE FOR LONGTERM SETTLEMENT OF THE STRUCTURE. 					
<p>Label the abutment and bent numbers at the centerline of support. Use one of the following labels under the support number.</p> <ul style="list-style-type: none"> FIXED or FIX or EXP <p>Label isolation bearings and semi-integral abutments as follows.</p> <ul style="list-style-type: none"> EXP 					
<p>Label the original ground line along the profile or survey line when information is available. Use one of the following labels.</p> <ul style="list-style-type: none"> APPROX EXIST GRND EXISTING GROUND 					
<p>Label the utilities in the elevation view when a separate utility sheet is not used. Label the utility size and type of utility when known. Label owner in parentheses when known. Label all utilities in uppercase text.</p>					
<p>Label the slope of fills under the structure.</p>					
<p>Label the retaining walls with the structure number. Use the label format.</p> <ul style="list-style-type: none"> WALL X 					
<p>Label the wingwalls.</p>					
<p>Label the concrete slope protection.</p>					
<p>Provide and label the minimum clearance at abutments between top of slope and bottom of girder or top of wall and bottom of girder. Meet the requirements of UDOT Std. Dwg. No. DD 8.</p>					
<p>Dimension the distance from the centerline of bearing to the layout line of the wall. Meet the requirements of UDOT Std. Dwg. No. DD 8.</p>					
<p>Label the abutment footings, bent footings, and piles or drilled shafts.</p>					
<p>Label parapets and/or fences and/or noise walls.</p>					
<p>Show and label the graffiti protection. Graffiti protection is required on all structures that use steel I-girders or UBT girders. Show on the view portion of the elevation.</p>					
<p>Detail the girders as simple or continuous span.</p>					
<p>Show and label the existing substructure elements. Show the required limits of removal if different from the standard specifications and modify the standard specification as appropriate. Showing the existing superstructure in this view is optional.</p>					
<p>Typical title: ELEVATION (NORMAL TO X)</p>					

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BRIDGE LOAD RATING TABLE	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Complete the load rating table prior to completion of task 4S4, Complete Structure Project Documents. Provide the preliminary load rating information on the S&L sheet if available. Use the load rating table from the sample sheet.					

HORIZONTAL ALIGNMENT DATA	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Do not show the alignment data for tangent alignments in a separate table. Show the alignment data in the plan view by indicating the tangent bearings. Place the curve name in an oval in the plan view adjacent to the portion of the control line defined by the curve.					
List the curve data for all curved alignments that influence the structure. List all the curve data shown on the roadway plans for both circular and spiral curves including the bearing of the semi-tangent from either PVC to PI or PI to PVT, depending upon the structure location. Identify the curve and/or roadway above each list of data shown as subheadings under the title curve data.					
CURVE DATA CURVE NUMBER I-15_Z6 Δ = 56°20'19" LEFT R = 2865.00 T = 1534.23 L = 2817.14 PI = STA 971+62.15 N = 217861.90 E = 599818.40 PC TO PI = N56°42'41"E					

LOCATION PLAN	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show a small scale plan of the area surrounding the structure. Include sufficient geographical information to ensure an accurate understanding of the bridge location.					
Show and label other structures in the immediate vicinity. Label at least one adjacent street.					
Indicate the structure boldly enough to distinguish it from all other structures or features shown.					
Indicate the stationing on main alignments at least 200 feet in either direction from the structure.					
Show the structure in the same orientation as the Plan View.					
Show North Arrow.					
Label the structure number of major features within the plan view area. Major features include walls, other bridges, adjacent structures and features that receive a structure number.					
Show the crossing stations at the main alignment intersection.					
Typical title: LOCATION PLAN					

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GENERAL NOTES	Provided (Originator)			Chk	Comments
	Yes	No	NA		
<p>Use the standardized wording of general notes shown below. Use only applicable notes. List the general notes on the first S&L sheet if possible. Add the following under a general notes heading on the first S&L sheet if the general notes are placed on the second S&L sheet.</p> <p style="text-align: center;"><u>GENERAL NOTES</u></p> <p>SEE "SITUATION AND LAYOUT 2 OF X" FOR THE GENERAL NOTES.</p>					
<p style="text-align: center;"><u>GENERAL NOTES</u></p> <ol style="list-style-type: none"> USE COATED DEFORMED CARBON STEEL BARS CONFORMING TO AASHTO M111 OR ASTM A775 AND AASHTO M31 GRADE 60, RESPECTIVELY. USE COATED DEFORMED CARBON STEEL BARS CONFORMING TO ASTM A706 GRADE 60 IN CONCRETE COLUMNS. USE ASTM A955, TYPE XM-28, GRADE 60 WHERE NOTED. USE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50 EXCEPT WHERE NOTED OTHERWISE. CHAMFER ALL EXPOSED CONCRETE CORNERS 3/4" EXCEPT WHERE NOTED OTHERWISE. PROVIDE 2" MINIMUM CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE NOTED OTHERWISE. USE CLASS AA(AE) CAST-IN-PLACE CONCRETE EXCEPT WHERE NOTED OTHERWISE. VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION. PROTECT EXISTING UTILITIES IN PLACE UNLESS NOTED OTHERWISE. COAT OR GALVANIZE ALL MISCELLANEOUS STRUCTURAL STEEL PLACED IN STRUCTURAL CONCRETE, UNLESS NOTED OTHERWISE. DO NOT SCALE DRAWINGS. HORIZONTAL DIMENSIONS ARE PLAN. VERTICAL DIMENSIONS ARE PLUMB. USE NORMAL-WEIGHT CLASS AA(AE) CAST-IN-PLACE CONCRETE EXCEPT WHERE NOTED OTHERWISE. USE LIGHTWEIGHT CLASS AA(AE) (NOMINAL 113 PCF) CAST-IN-PLACE CONCRETE FOR THE DECK, PARAPET ON THE DECK, SIDEWALKS AND ABUTMENT DIAPHRAGMS. 					<i>Delete notes not required</i>

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

DESIGN DATA	Provided (Originator)			Chk	Comments
	Yes	No	NA		
List all the pertinent design data. Use current design guidelines unless project documents or the SDDM require otherwise. See the sample S&L sheet and the information below.					
<p style="text-align: center;"><u>DESIGN DATA</u></p> <p>HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION 2010 AND THE UDOT STRUCTURES DESIGN AND DETAILING MANUAL, 2013. SEISMIC DESIGN IN ACCORDANCE WITH AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION 2010. LOAD RATING IN ACCORDANCE WITH THE MANUAL FOR BRIDGE EVALUATION, SECOND EDITION 2010 AND THE UDOT BRIDGE OPERATIONS MANUAL, 2013.</p> <p>CAST-IN-PLACE CONCRETE: $f'_c = 4.0$ KSI $n = 8$ CLASS AA(AE) $f_y(\text{REINF}) = 60$ KSI LIGHTWEIGHT CONCRETE: $f'_c = 4.0$ KSI $n = 11$ CLASS AA(AE) $f_y(\text{REINF}) = 60$ KSI PRESTRESSED GIRDER CONCRETE: $f'_c = 7.0$ KSI $f'_{ci} = 6.0$ KSI CLASS AA(AE) $f_y(\text{REINF}) = 60$ KSI PRECAST DECK PANEL CONCRETE: $f'_c = 6.0$ KSI $f'_{ci} = 4.5$ KSI CLASS AA(AE) $f_y(\text{REINF}) = 60$ KSI PRESTRESSED STRAND: 0.375" DIA GRADE 270 LOW RELAXATION STRAND(PANELS) 0.500" DIA GRADE 270 LOW RELAXATION STRAND(GIRDER) 0.600" DIA GRADE 270 LOW RELAXATION STRAND(GIRDER) STRUCTURAL STEEL: $F_y = 50$ KSI (GRADE 50) $F_y = 70$ KSI (GRADE 70) GIRDER (WHERE NOTED) $F_y = 36$ KSI (GRADE 36) ANGLES (WHERE NOTED) SACRIFICIAL WEARING SURFACE: 1/2" CONCRETE FUTURE WEARING SURFACE: 40 PSF DESIGN SPEED: 70 MPH I-15, 35 MPH 1600 NORTH SEISMIC: 7% PROBABILITY OF EXCEEDANCE IN 75 YR DESIGN EVENT $PGA = 0.30g$, $S_s = 0.70g$, $S_1 = 0.25g$ $A_s = 0.36g$, $SD_s = 0.87g$, $SD_1 = 0.48g$ SITE CLASS D, SDC D BRIDGE CLASSIFICATION - ESSENTIAL TRAFFIC DATA: NORTHBOUND 2030 ADT = 107,900 2008 ADT = 65,800 SOUTHBOUND 2030 ADT = 107,900 2008 ADT = 65,800 PARAPET TEST LEVEL: TL-4</p>					<p>List the actual edition of the code and interims used in design.</p> <p>List actual material properties and project parameters used in design.</p> <p>Delete unused values.</p> <p>Revise speeds and road names as required.</p> <p>Do not use TL-5. Use TL-4 for mainline parapets or high speed roads. Use TL-3 for local roads.</p>

QUANTITIES	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show a quantities table. Use the table format in the sample sheet.					
Use bid item titles and units identical with the Measurement and Payment document. Use only applicable items. See the sample S&L sheet for typical formatting. See the SDDM Chapter 4 for typical quantities.					

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HYDRAULIC DATA	Provided (Originator)			Chk	Comments																																																							
	Yes	No	NA																																																									
List the hydraulic data using the following format.																																																												
<table><tr><th colspan="2">HYDRAULIC DATA</th></tr><tr><td>DRAINAGE AREA</td><td>2040 SQ MI</td></tr><tr><td>FLOWLINE ELEV AT APPROACH SECTION</td><td>4251.51 FT</td></tr><tr><td>FLOWLINE ELEV AT BRIDGE SECTION</td><td>4251.66 FT</td></tr><tr><td>DESIGN FREQUENCY</td><td>100 YR</td></tr><tr><td>DESIGN DISCHARGE (Qd)</td><td>6200 CFS</td></tr><tr><td>UNCONSTRICTED WSEL AT APPROACH SECTION (Qd)</td><td>4262.86 FT</td></tr><tr><td>CONSTRICTED WSEL AT APPROACH SECTION (Qd)</td><td>4262.69 FT</td></tr><tr><td>WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Qd)</td><td>4262.16 FT</td></tr><tr><td>VELOCITY THROUGH BRIDGE SECTION (Qd)</td><td>8.43 FPS</td></tr><tr><td>100 YR DISCHARGE (Q100)</td><td>6200 CFS</td></tr><tr><td>UNCONSTRICTED WSEL AT APPROACH SECTION (Q100)</td><td>4262.86 FT</td></tr><tr><td>CONSTRICTED WSEL AT APPROACH SECTION (Q100)</td><td>4262.69 FT</td></tr><tr><td>WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Q100)</td><td>4262.16 FT</td></tr><tr><td>VELOCITY THROUGH BRIDGE SECTION (Q100)</td><td>8.43 FPS</td></tr><tr><td>DEPTH OF CONTRACTION SCOUR (Q100)</td><td>1.89 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT LEFT ABUTMENT (Q100)</td><td>5.03 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT RIGHT ABUTMENT (Q100)</td><td>13.50 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT BENTS (Q100)</td><td>NA</td></tr><tr><td>500 YR DISCHARGE (Q500)</td><td>11100 CFS</td></tr><tr><td>UNCONSTRICTED WSEL AT APPROACH SECTION (Q500)</td><td>4266.16 FT</td></tr><tr><td>CONSTRICTED WSEL AT APPROACH SECTION (Q500)</td><td>4265.61 FT</td></tr><tr><td>WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Q500)</td><td>12.96 FPS</td></tr><tr><td>DEPTH OF CONTRACTION SCOUR (Q100)</td><td>5.56 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT LEFT ABUTMENT (Q500)</td><td>11.69 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT RIGHT ABUTMENT (Q500)</td><td>16.56 FT</td></tr><tr><td>TOTAL SCOUR DEPTH AT BENTS (Q500)</td><td>NA</td></tr></table>					HYDRAULIC DATA		DRAINAGE AREA	2040 SQ MI	FLOWLINE ELEV AT APPROACH SECTION	4251.51 FT	FLOWLINE ELEV AT BRIDGE SECTION	4251.66 FT	DESIGN FREQUENCY	100 YR	DESIGN DISCHARGE (Qd)	6200 CFS	UNCONSTRICTED WSEL AT APPROACH SECTION (Qd)	4262.86 FT	CONSTRICTED WSEL AT APPROACH SECTION (Qd)	4262.69 FT	WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Qd)	4262.16 FT	VELOCITY THROUGH BRIDGE SECTION (Qd)	8.43 FPS	100 YR DISCHARGE (Q100)	6200 CFS	UNCONSTRICTED WSEL AT APPROACH SECTION (Q100)	4262.86 FT	CONSTRICTED WSEL AT APPROACH SECTION (Q100)	4262.69 FT	WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Q100)	4262.16 FT	VELOCITY THROUGH BRIDGE SECTION (Q100)	8.43 FPS	DEPTH OF CONTRACTION SCOUR (Q100)	1.89 FT	TOTAL SCOUR DEPTH AT LEFT ABUTMENT (Q100)	5.03 FT	TOTAL SCOUR DEPTH AT RIGHT ABUTMENT (Q100)	13.50 FT	TOTAL SCOUR DEPTH AT BENTS (Q100)	NA	500 YR DISCHARGE (Q500)	11100 CFS	UNCONSTRICTED WSEL AT APPROACH SECTION (Q500)	4266.16 FT	CONSTRICTED WSEL AT APPROACH SECTION (Q500)	4265.61 FT	WSEL AT UPSTREAM FACE OF BRIDGE SECTION (Q500)	12.96 FPS	DEPTH OF CONTRACTION SCOUR (Q100)	5.56 FT	TOTAL SCOUR DEPTH AT LEFT ABUTMENT (Q500)	11.69 FT	TOTAL SCOUR DEPTH AT RIGHT ABUTMENT (Q500)	16.56 FT	TOTAL SCOUR DEPTH AT BENTS (Q500)	NA	Update values.	
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SECTION THROUGH STRUCTURE	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show the section normal to the structure. Include a bent typical section if the bridge is a multi-span structure. Show the final cross section. Add an additional S&L sheet to show the phasing. See the sample drawings for an example of the phasing sheet.					
Label the control and profile line(s). <ul style="list-style-type: none"> I-15 CONTROL LINE I-15 NB PGL I-15 SB PGL 					
Label the chord line when a chord line is used. A chord line is not required.					
Show and dimension the distance between profile lines for twin structures.					
Show and dimension the out to out of deck. <ul style="list-style-type: none"> X'-X" OUT TO OUT 					
Show, label and dimension the lanes, shoulders, parapets, curbs, sidewalks and medians. Typical names include. <ul style="list-style-type: none"> LANE MEDIAN SHOULDER SIDEWALK PARAPET HOV/TOLL TRAIL 					
Show, label and dimension the parapets, fences, and noisewalls.					

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

SECTION THROUGH STRUCTURE	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Dimension the roadway width. The roadway width is the distance between parapets or curbs. • X'-X" ROADWAY WIDTH					
Label the structure centerline only if it is required for an adequate interpretation of the view.					
Label the superelevation on the deck. Place a label on each side of the PGL with the arrow pointing away from the PGL and the superelevation labeled negative if the slope goes down from the PGL. Use the following label if the superelevation varies and provide a table defining the superelevation transitions. • VARIES					
Show the shape and spacing of the girders					
Label the typical girder spacing and deck overhang distance.					
Label the maximum and minimum girder spacing for varying girder spaces.					
Include the girder type in the spacing label. Typical labels include. • X STEEL PLATE GIRDERS X SPA AT X'-X" = X'-X" • X UBTXX PRESTRESSED CONCRETE GIRDERS X SPA AT X'-X" = X'-X" • X UBTXX PRESTRESSED CONCRETE GIRDERS X SPA AT VARIES, X'-X" AT ABUT #1, X'-X" AT ABUT #2					
Label the overlay if an overlay is required. • THIN BONDED POLYMER OVERLAY, TYPE X					X = I for state or interstate bridges, X = II for local roads
Label the precast concrete deck panels. • PRECAST CONCRETE DECK PANEL					
Show and label the conduits in all parapets. The minimum requirement is listed below. 2 - 2" DIA ELECTRICAL CONDUITS, TYP					
Dimension the structure depth at the centerline of girder. The structure depth is the distance from the top of deck to the bottom of the girder at the support or the point of minimum vertical clearance. Typical label for steel girders. • VARIES, X'-X" AT PTMVC Typical label for prestressed concrete girders. • X'-X" AT SUPPORT					
Label the typical deck thickness.					
Label the column size for multi-span structures. List the dimension normal to the facility crossed first for rectangular columns. • 3'-7" SQUARE COLUMN • 3'-0" X 5'-0" COLUMN • 4'-0" DIAMETER COLUMN					
Label the top of retaining wall or coping or slope protection. • TOP OF WALL • TOP OF WALL COPING • TOP OF SLOPE PROTECTION					
Show and label the deep foundation on the substructure . • DRIVEN PILE, TYP • DRILLED SHAFT, TYP					
Typical title: SECTION THROUGH STRUCTURE • Use other descriptive titles as needed to distinguish between adjacent structures defined by a single structure number.					

SITUATION AND LAYOUT (S&L) SHEETS GUIDELINES AND CHECKLIST FOR A NEW BRIDGE

SUPERELEVATION DATA	Provided (Originator)			Chk	Comments											
	Yes	No	NA													
<p>Provide a superelevation data table containing alignment and the superelevation transition points for profiles with varying superelevation. Use the format.</p> <table><tr><th colspan="3">X SUPERELEVATION</th></tr><tr><th>STATION</th><th>LEFT</th><th>RIGHT</th></tr><tr><td>X+XX.XX</td><td>-X.XX%</td><td>+X.XX%</td></tr><tr><td>X+XX.XX</td><td>+X.XX%</td><td>-X.XX%</td></tr></table>	X SUPERELEVATION			STATION	LEFT	RIGHT	X+XX.XX	-X.XX%	+X.XX%	X+XX.XX	+X.XX%	-X.XX%				
X SUPERELEVATION																
STATION	LEFT	RIGHT														
X+XX.XX	-X.XX%	+X.XX%														
X+XX.XX	+X.XX%	-X.XX%														
Show each alignment or profile line in a separate table.																

PROFILE DATA	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Show the grade of each alignment leading to and from any vertical curves. Show straight grade if no vertical curve. List profile grades to three decimal places.					
<p>Show stations and elevations of key profile points.</p> <ul style="list-style-type: none"> PVC STA X+XX.XX ELEV XXXX.XX PI STA X+XX.XX ELEV XXXX.XX PVT STA X+XX.XX ELEV XXXX.XX 					
Dimension the lengths of any vertical curves in decimal feet. Use two decimal places.					
<p>Indicate the location of the structure(s) on the appropriate alignment(s) or over the alignment crossed. Label the structure.</p> <p>STRUCTURE X-XXX.</p>					
Typical title: X PROFILE					

PHASING	Provided (Originator)			Chk	Comments
	Yes	No	NA		
Provide a typical section for each phase.					
Dimension the traffic lanes in each phase.					
Dimension the gap between the existing structure and the new structure.					
Dimension the width of the section constructed in the phase shown.					
Dimension the number of girders in the section constructed in the phase shown. Use the format defined in the Section Through Structure section.					
Dimension the girder overhang in the section constructed in the phase shown.					
Provide a dimension from the future alignment to any saw cut lines on existing structures.					
Provide the lane arrangement for each phase. Show the dimension from the back of temporary parapets to the edge of the supporting structure. Dimension the distance between the existing structure and the new structure.					
Typical title: TYPICAL SECTION PHASE X					